

American Association of Physicians of Indian Origin

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HIV IN INDIA THE PROBLEM

HIV, the virus responsible for Acquired Immunodeficiency Syndrome (AIDS), was detected in India in 1986 in Tamil Nadu. Since the late 1980s India has seen rapid progression of the epidemic with prevalence in all areas of the country. The Government of India estimates over 5 million individuals are infected. The mode of spread is similar to Africa. Initial high risk groups such as intravenous drug users and commercial sex workers in port cities are assumed to be first infected. In India truck drivers are considered a major factor in rapid spread across large geographic areas due to contact with commercial sex workers. Introduction of the epidemic into the general population has occurred with devastating consequences. Monogamous housewives and their children bear the brunt of this modern day plague. Since the HIV epidemic affects primarily the economically most productive segment of the population, the epidemic threatens to become an all consuming conflagration which will negate all of the socio-economic gains of the last fifty years crippling India's economic engine.

The National AIDS Control Organization of India (NACO), charged with developing policy and infrastructure to stem the epidemic, has promoted a national policy statement and a number of guidelines for HIV/AIDS for the Republic of India (www.naco.nic.in/nacp/ctrlpol.htm and www.naco.nic.in/nacp/guide.htm) NACO has made remarkable headway in promoting safety of the blood supply, establishing centers for voluntary care and testing (VCT), epidemiological surveillance in sentinel sites and making these reports public. Following on pilot successes Maternal and Child Transmission Treatment Centers (MCTTC), NACO announced in April 2003 that VCT and Antiretroviral treatment (ART) would be made available to pregnant women, in a staged process, emphasizing first the six highest risk states. In December 2003, the Government of India announced a commitment to provide ART to HIV positive individuals, also beginning in a staged process with the highest risk areas.

Even with international and Indian funding, collaboration among NGOs, industry, State AIDS Control Societies and the Indian pharmaceutical industry, the reach and effectiveness of surveillance data gathering, training and treatment services, including VCT and the reach of community based care services, must be dramatically scaled up and brought closer to the people. India's healthcare infrastructure is uneven at best and over 90% of health care delivery is in the private sector. The private health care system ranges from the most modern technologically sophisticated private hospitals which cater to the miniscule segment of the urban elite to ill equipped poorly trained and sometimes unlicensed health care practitioners more prevalent in the rural areas. The public health infrastructure particularly in rural areas leaves much to be desired.

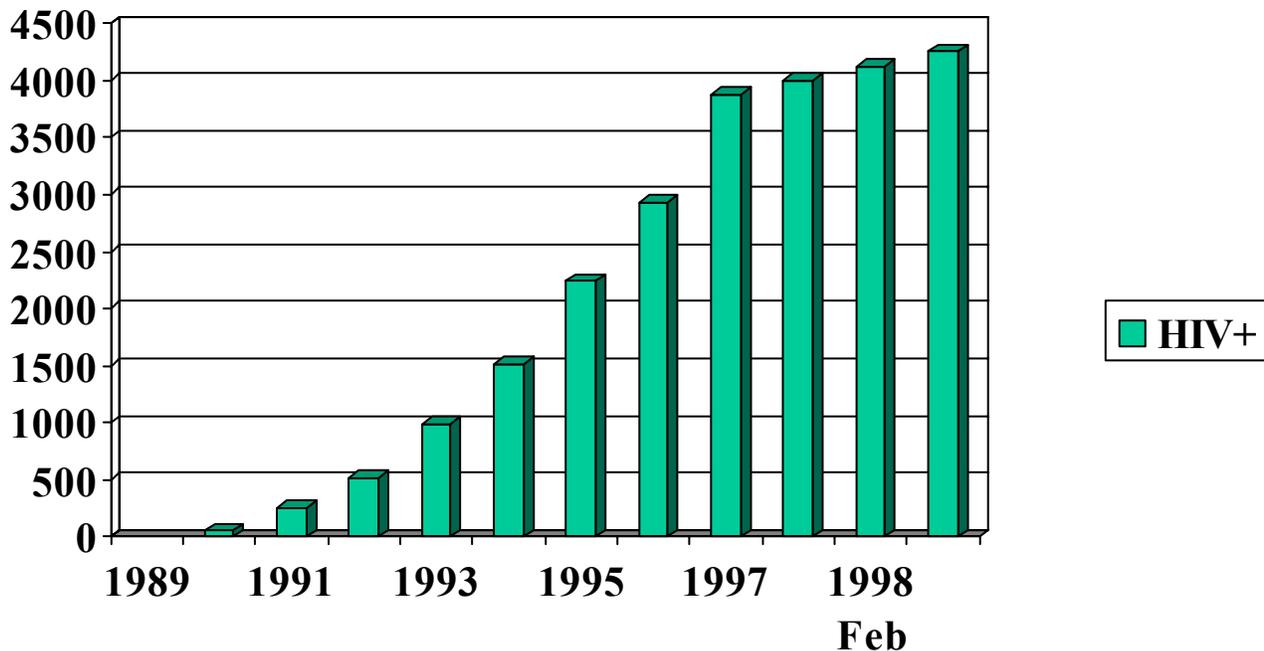
Indian health care regulatory systems are stretched to the breaking point and lack of resources make it very difficult to effectively monitor safety of health care delivery in the private sector. In the case of blood banks this deficiency continues to constitute a major hazard for transmission of HIV as well as other blood borne pathogens (Hepatitis B and C, malaria etc). Tuberculosis, malaria and in some parts of the country leprosy endemic in large segments of the population continue to strain public health resources.

India with a population of over a billion is a Federal Republic with twenty eight different states and seven union territories. Sixteen major languages each with its own script (Hindi, English, Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Malayalam, Kannada, Oriya, Punjabi, Assamese, Kashmiri, Sindhi and Sanskrit) and eight hundred and forty four dialects are spoken in the 602 districts of this vast subcontinent. The enormous diversity of geography is reflected in the culture and socio-economic conditions prevalent in India. Any generalization about conditions in India is difficult. Perhaps the only individual in modern times to really comprehend the kaleidoscope that is India was Mahatma Gandhi, he realized that "India could not attain independence from the British by merely making speeches to the urban elite; an effective campaign required mobilizing the vast masses of Indians who lived in the villages" this is still relevant today in our war against HIV AIDS.

India's population is still predominantly rural and a majority of India's GDP is dependent on this population. Any strategy to combat the HIV epidemic and avert economic disaster cannot focus merely on the urban centers. We must devise an effective approach to address the HIV epidemic in rural India. Rural India with its lack of roads, sanitation, safe drinking water, the enormous poverty and ignorance resembles Africa in many ways and is vulnerable to the kind of HIV induced catastrophe that now afflicts much of sub Saharan Africa.

THE HIV EPIDEMIC IN ANDHRA PRADESH

Andhra Pradesh in south India is one of the high HIV prevalence areas, State Government data demonstrate an exponential increase in the incidence of HIV infection as illustrated by the chart below:



Unfortunately the above data (as most published data from India) is derived exclusively from urban centers. Very little is known about HIV in the rural areas in Andhra Pradesh or any other part of rural India. SHARE “MediCiti” (founded by Americans of Indian Origin) a not for profit health care system comprising of two hospitals a medical school and a school of nursing (www.sharemediciti.org) has initiated a large HIV program based in rural Andhra Pradesh approximately 40 kilometers from Hyderabad the state capital. MediCiti has analyzed its data on HIV over several years from urban volunteer blood donors and found that incidence over several years was relatively stable (data from 1997-2002) 14,185 tested 0.38% are HIV infected, however surprisingly the incidence in rural pregnant women (data from 2001-2002, 1176 tested 1.19% are HIV infected) was three times that of the urban blood donors (OR 3.096: 95% CI 1.717-5.585 $p < 0.001$). “*HIV Infection in Pregnant Women From Rural South India compared to HIV Infection in Volunteer Blood Donors from Urban South India*”. Yeldandi V, Yeldandi A, Chundi V, Saluja G S, Oruganti G, Dass S M, Beerum N, Reddy P S. The 41st Annual Meeting of IDSA, October 9-12, 2003, San Diego, CA.

Alarmed by these findings MediCiti launched an intensive HIV AIDS awareness campaign in the villages surrounding MediCiti. A study of HIV incidence and risk factors was approved by MediCiti’s ethics Committee (registered with U.S. Department of health & human services, FWA #00002084) and the IRB at Johns Hopkins University (Baltimore, MD) Preliminary results are available for 5372 participants. Male: 45% ; Female: 55% Age: 18-25: 22%; 26-35:31%; 36-45:22%. 82% married; 10% never married. 5% of all married participants report more than one partner after marriage – Of those reporting so, 88% were men 2% report sexual contact in exchange for money at least once. 1.5% participants report non-spousal partners as most recent sexual partner (sex worker, friend) 98% report never using condoms with most recent partners. Sero-positive Individuals n=69 – HIV prevalence=1.3% (95% CI 1%- 1.6%). 62% Male; 38% Female. 84% 18-45 years of age. 83% were married. 12% reported 2 or more sexual partners pre-marriage and 5% reported multiple partners after marriage. 3% have had more than one partner in the past 6 months. 25% of sero-positives report daily consumption of alcohol.

Many of the participants, particularly women did not perceive themselves to be at any risk. Women confidently proclaimed that they were married and faithful to their husbands and as such they were not concerned about HIV. Most participants were aware that there are testing services available for AIDS. However, the closest center for such testing was the city nearby which was 30 km away from the village site. Condom use was rare. Women associated condom with family planning. Alcohol use was high among men. Women often complained of domestic violence related to alcohol. *“Development of a HIV Voluntary Counseling and Testing Model for a rural population in southern India”*. Sivaram S, Saluja GS, Manik Das, Reddy PS and Yeldandi V. POSTER at the XV International AIDS Conference, Bangkok Thailand, 11-16 July, 2004.

Clearly the rural HIV infected individuals particularly the women do not conform to the traditional “High Risk” profile. Therefore an obsessive focus on “High Risk” groups for prevention programs will leave large segments of the population vulnerable to infection with HIV. Also alarming was the total lack of impact of mass media (bill boards, Television, pamphlets, etc) on actual reduction of risk by rural individuals. Interestingly the same experience was noted by the HIV program at Bel-Air Hospital (www.poweroflove.org/program_b_3.shtml) *Personal communication Fr. Tomy*. The role of alcohol as a major risk factor that needs to be addressed is confirmed by the experience of The Freedom Foundation (www.thefreedomfoundation.org) *Personal communication Ashok Rau*. A strong sentiment expressed by many people working in the field is the need to move away from an excessive focus on “High Risk” groups and recognize the vulnerability of all in the risk of acquiring HIV infection. Rural Indians may be poor but not stupid, they see through superficial campaigns which focus on condoms but fail to address the safety of blood supply or safe drinking water. An effective program to combat HIV needs to address basic health needs in a comprehensive manner. Only by addressing all essential health care needs will we have the credibility to address sensitive political, societal/cultural issues which impact on the risk of HIV infection

POSSIBLE SOLUTIONS TO THE HIV PROBLEM IN INDIA

The American Association of Physicians of Indian Origin is advocating additional initiatives to support and complement the programs initiated by the Government of India as well as other entities in India. AAPI is about to launch a major program (CRISP) to address the risk of HIV infection in truck drivers in partnership with SHARE MediCiti, The Metro Foundation (www.themetrofoundation.org) and Gati Ltd (www.gati.com). AAPI proposes to partner with Health Care Providers in India to build collaborative programs by establishing five centers of excellence in Northern, Eastern, Western, Central and Southern regions of India. Each center will have a laboratory dedicated to supporting the needs for testing and care of persons with HIV as well as serve as a nucleus for clinical care, education and research. The five centers will be networked by a Web Portal dedicated to supporting health care professionals caring for persons with HIV. The web portal will provide a centralized mechanism for logistics support for arranging confidential testing as well as supply of Anti Retroviral Therapy. This will also assist in tracking the epidemic and its effect in real time thus facilitating resource allocation planning. The basic model has already been validated by MediCiti’s REACH program which uses a computerized database to track its rural health care program which has succeeded in achieving better than 95% rates of immunization and antenatal care.

Since over 90% India’s existing healthcare services are provided by the private sector, it is essential to reach out to each and every provider and support them by enhancing their skills as well as give them access to supporting infrastructure. The present strategy of relying only on certain designated institutions and “Specialists” is unlikely to be able to meet the demands of the overwhelming numbers of HIV infected persons. AAPI would suggest that each and every provider be assisted in acquiring a minimum core body of knowledge and skills to address (1) HIV and other blood borne pathogens, (2) Tuberculosis, (3) Malaria, (4) Common food borne pathogens, basic hygiene and nutrition, (6) Immunizations. This comprehensive approach is more credible than the present fragmentation of approaches to various infectious diseases which are handled by separate parallel programs. An essential component of a successful strategy is to address health care economics, it is imperative to recognize that health care providers must be able to make a “Living”, to insist on altruism alone or charity is unrealistic, we need to assist Indians in creating a viable private health care financing mechanism, once again MediCiti provides a model since a large proportion of operating expenses are generated by patient care revenues which subsidize the rural programs. Philanthropic contributions have gone largely to fund major capital projects.



MediCiti is a project of "Science Health Allied Research Education" a not for profit institution founded by Asian Indians in the USA. S.H.A.R.E. has established a healthcare system in Andhra Pradesh (South India) consisting of hospitals, a Medical School, Nursing School, School for Respiratory Therapy, Institute for Craniofacial Surgery (funded in part by Smile Train Inc) and MediCiti Immunology & Infectious Diseases Research Institute

Affordable Comprehensive Health (REACH) serves a rural population of 43,000 in two counties. The villages are economically deprived with a significant population of gypsies who still maintain their traditions. The program encompasses health education, antenatal care, including nutritional supplements, immunization, primary, secondary and tertiary care



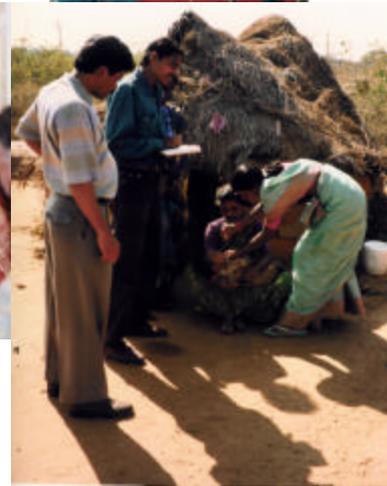
clinics staffed by physicians in the villages. Four wheel drive vehicles are needed on rural dirt roads to transport physicians to ambulatory clinics and patients to and from hospital



The Community Health Volunteers (CHV) are responsible for the rural population and ensure that each family is visited at least monthly to update the health status and ensure universal access to care. The program is tracked using a computerized database which updates demographic, socioeconomic and health parameters in near real time.



REACH Blindness eradication program has served over 80% of villagers with cataracts



REACH Staff and CHV go to the doorstep for administering vaccines and micronutrients



The Cancer Prevention clinic staff collaborate with Johns Hopkins to study the role of HPV in Cervical Cancer



Rotarians visit with HIV patients at MIIDRI

MediCiti Immunology & Infectious Diseases Research Institute

Effective, affordable and comprehensive care of persons affected by HIV/AIDS

Network with health care professionals working with persons affected by HIV/AIDS

Education and training of health care professionals and the community

Research in technologic, social and cultural tools to address the HIV pandemic

Forum for international expert interaction with local experts

Collaborative program with Johns Hopkins funded in part by The World AIDS Fund

MIIDRI Rural HIV awareness programs



Integrated Child Development Services (ICDS) provides nutritional supplements to pregnant women and children to eradicate malnutrition amongst the rural poor



CHV training for HIV awareness

MIIDRI Tuberculosis Control Program

Revised National Tuberculosis Control Program

www.tb.cindia.org



Community Health Volunteers Training session for tuberculosis screening and direct observed therapy



Jenny Huang, Sarah Kim, and Sheila Am... Students from Baylor Austin Texas were participants of the MediCiti International Health and Medical Education Program (IHMEP) MediCiti accepts students and postgraduate trainees rotations at REACH affiliated programs. MediCiti provides lodging free and does not charge any administrative fees. Participants are responsible for travel food

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